These will be given to you on Quiz 1. You will need to understand them, though!

\[ \mu = \frac{\sum x}{N} \quad \text{and} \quad x = \frac{\sum x}{n} \]

\[ \sigma^2 = \frac{\sum (x - \mu)^2}{N} \quad \text{and} \quad s^2 = \frac{\sum (x - \bar{x})^2}{n-1} \]

\[ \sigma = \sqrt{\frac{\sum (x - \mu)^2}{N}} \quad \text{and} \quad s = \sqrt{\frac{\sum (x - \bar{x})^2}{n-1}} \]

Median Position Number = \( \frac{N+1}{2} \), or \( \frac{n+1}{2} \)

Midrange = \( \frac{\text{Min} + \text{Max}}{2} \)

From a Frequency Table: Estimated Mean = \( \frac{\text{Estimated Sum}}{N} \), or \( \frac{\sum f \cdot x}{\sum f} \)

Weighted Mean = \( \frac{\sum w \cdot x}{\sum w} \)

Range = Max – Min

\[ z = \frac{x - \mu}{\sigma}, \text{ or } z = \frac{x - \bar{x}}{s} \]

IQR = \( Q_3 - Q_1 \)